

Appl. No. : 10/816,340
Filed : March 31, 2004

AMENDMENTS TO THE CLAIMS

Please amend Claim 31.

1.-30. (Canceled)

31. (Currently amended) A system for electrochemical mechanical processing of a conductive face of a wafer using a process solution, comprising:

a wafer carrier holding the wafer;

a solution chamber to hold the process solution, the solution chamber having an upper opening;

a compressible and flexible pad, having a polishing surface and fluid channels, placed between the upper opening of the solution chamber and the conductive face of the wafer, wherein the compressible and flexible pad is configured to bow and apply more pressure near the center of the conductive face than the rest of the conductive face as the pressure of the process solution in the solution chamber increases; **[[and]]**

an electrode in contact with the process solution, wherein the system is configured to apply a potential difference between the conductive face of the wafer and the electrode;
and

a control system programmed to control pressure to ensure bowing the pad while relatively moving the conductive face of the wafer and the pad into contact.

32. (Original) The system of Claim 31, further comprising a perforated and flexible support plate placed under the compressible and flexible pad.

33. (Original) The system of Claim 31, further comprising a porous membrane placed under the compressible and flexible pad.

34. (Original) The system of Claim 32, wherein a porous membrane is placed under the perforated and flexible support plate.

35. (Previously presented) The system of Claim 31, further comprising a pressure sensor placed in fluid communication with the process solution in the process solution chamber.

36. (Previously presented) The system of Claim 35, wherein the signal of the pressure sensor is fed to a solution flow controller to adjust flow rate of the process solution.

37. (Original) The system of Claim 31, wherein electrochemical mechanical processing comprises electrochemical mechanical deposition.

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38. (Original) The system of Claim 31, wherein electrochemical mechanical processing comprises electrochemical mechanical polishing.

39.-58. (Canceled)